

Set	Items	Description
S1	16	COMPREHENSIVE (2N) EMISSION? (3N) (FORMULA? OR CALCULAT?)
S2	12	RD (unique items)
File	2:INSPEC	1969-2003/Aug W1 (c) 2003 Institution of Electrical Engineers
File	8:EI Compendex(R)	1970-2003/Aug W1 (c) 2003 Elsevier Eng. Info. Inc.
File	29:Meteor.& Geoastro.Abs.	1970-2002/Jul (c) 2002 Amer.Meteorological Soc.
File	35:Dissertation Abs Online	1861-2003/Jul (c) 2003 ProQuest Info&Learning
File	88:Gale Group Business A.R.T.S.	1976-2003/Aug 07 (c) 2003 The Gale Group
File	180:Federal Register	1985-2003/Aug 15 (c) 2003 format only The DIALOG Corp
File	285:BioBusiness(R)	1985-1998/Aug W1 (c) 1998 BIOSIS
File	484:Periodical Abs Plustext	1986-2003/Sep W1 (c) 2003 ProQuest
File	635:Business Dateline(R)	1985-2003/Aug 14 (c) 2003 ProQuest Info&Learning
File	993:NewsRoom	2002/ (c) 2003 The Dialog Corporation
File	994:NewsRoom	2001 (c) 2003 The Dialog Corporation

2/5/1 (Item 1 from file: 2)

DIALOG(R) File 2:INSPEC

(c) 2003 Institution of Electrical Engineers. All rts. reserv.

6805830 INSPEC Abstract Number: C2001-02-3360B-050

Title: Environmental evaluation of intelligent cruise control (ICC) vehicles

Author(s): Bose, A.; Ioannou, P.

Author Affiliation: Dept. of Electr. Eng. Syst., Univ. of Southern California, Los Angeles, CA, USA

Conference Title: ITSC2000. 2000 IEEE Intelligent Transportation Systems. Proceedings (Cat. No.00TH8493) p.352-7

Publisher: IEEE, Piscataway, NJ, USA

Publication Date: 2000 Country of Publication: USA vii+509 pp.

ISBN: 0 7803 5971 2 Material Identity Number: XX-2000-02459

U.S. Copyright Clearance Center Code: 0 7803 5971 2/2000/\$10.00

Conference Title: 2000 IEEE Intelligent Transportation Systems. Proceedings

Conference Date: 1-3 Oct. 2000 Conference Location: Dearborn, MI, USA

Medium: Also available on CD-ROM in PDF format

Language: English Document Type: Conference Paper (PA)

Treatment: Practical (P)

Abstract: This paper environmentally evaluates the intelligent cruise control (ICC) system using a **comprehensive** modal **emissions** model that **calculates** vehicle **emissions** depending on its mode of operation, i.e., steady state cruise, acceleration/deceleration, etc. The ICC is designed to guarantee accurate speed and position tracking during "smooth" acceleration manoeuvres. As a consequence, fuel consumption and air pollution is reduced by 8.5% and 8.1%-18.4% respectively, due to the presence of 10% ICC vehicles during smooth acceleration manoeuvres. Furthermore, human factor considerations dictate that the response of an ICC vehicle should be smooth. As a result, improvements of the order of 28.5% and 1.5%-60.6% can be observed during rapid acceleration transients in fuel consumption and air pollution levels, respectively, due to the presence of 10% semi-automated vehicles. The data obtained are qualitatively valid and demonstrate the beneficial effect of ICC vehicles on air quality and fuel consumption. (9 Refs)

Subfile: C

Descriptors: air pollution; automobiles; intelligent control; position control; tracking; velocity control

Identifiers: intelligent cruise control; emissions model; speed control; position control; tracking; fuel consumption; air pollution; automobiles

Class Codes: C3360B (Road-traffic system control); C3120C (Spatial variables control); C3120E (Velocity, acceleration and rotation control)

Copyright 2001, IEE

2/5/2 (Item 1 from file: 29)

DIALOG(R) File 29:Meteor.& Geoastro.Abs.

(c) 2002 Amer.Meteorological Soc. All rts. reserv.

0213703 MGA43070204

Modeling the formation and deposition of acidic pollutants

Walcek, Chris J.; Chang, Julius S.

Atmospheric Sciences Research Center, State University of New York, Albany, NY

In: Delleur, Jacques W. (ed.), Atmospheric deposition., Oxfordshire, UK, IAHS (International Association of Hydrological Sciences), 1989. p. 21-26. Refs., figs. (International Association of Hydrological Sciences (IAHS). IAHS Publications, No. 179).

Country of Publication: UK

A sophisticated mathematical model of the chemistry, transport, and deposition of tropospheric trace gases provides a useful tool for assessing the relationship between emission and deposition of atmospheric pollutants. We have developed a three-dimensional Regional Acid Deposition Modeling system (RADM) which calculates short-term concentrations and wet and dry deposition of trace species over the northeastern U.S. and Canada. Emissions of SO<<SUB 2>>, nitrogen oxides, organic compounds, ammonia, and

carbon monoxide are specified using a comprehensive pollutant emission inventory. The model calculates the transport and chemical transformation rate of these compounds and other secondary pollutants (e.g., ozone, sulfuric acid, nitric acid) using meteorology data and a detailed gas-phase chemical reaction mechanism. A cloud chemistry and scavenging model computes trace species aqueous chemistry and wet deposition rates during cloudy periods, and dry deposition rates to underlying surfaces are calculated for many chemical species. The model has been evaluated using precipitation chemistry observations, and several studies have been performed demonstrating the interaction between meteorology and chemistry of acid rain formation.

DESCRIPTORS: Acid pollutant deposition; Acid precipitation chemistry; Wet and dry deposition